

MESENTERIC DOPPLER SONOGRAM

Recommended Transducer(s):

GE 700: 3.5 curved linear probe

Acuson Sequoia: 4Cl or 4VI

GE Logiq: 3.5 curved, 4 sector

The patient should be NPO at least 8 hours prior to exam.

Post-prandial imaging is not necessary.

Images:

Follow **RUQ (“Limited”) ABDOMINAL SONOGRAM** and add the following:

- Color Doppler:
- Sagittal aorta including Celiac and SMA origins.
 - Transverse Celiac origin.
- Spectral Doppler:
- At least 3 waveforms each of the celiac and SMA within 3 cm. of origins.
 - Measure PSV and EDV for each
 - Common hepatic artery waveform (just past splenic artery take-off).
 - If SMA is non-turbulent / biphasic (normal is triphasic), look for replaced right hepatic artery off SMA (right lateral aspect of SMA going toward liver).

Criteria for mesenteric artery stenosis:

- Celiac:
- PSV > or equal to 200 cm/sec = 70% stenosis
 - No flow = occluded
 - EDV > or equal to 55 cm/sec = > or equal to 50% stenosis
- SMA:
- PSV > or equal to 275 cm/sec = > or equal to 70% stenosis
 - No Flow = occluded
 - EDV > or equal to 45 cm/sec = > or equal to 50% stenosis (may be elevated if replaced right hepatic artery, in which case SMA waveform will be low resistance biphasic).
- CHA:
- Retrograde flow = severe celiac artery stenosis/ occlusion

Duplex-Doppler ultrasound diagnosis of high-grade SMA/celiac artery stenosis / occlusion does **NOT** necessarily mean the patient has chronic mesenteric ischemia --it remains a clinical diagnosis.

July 9, 2002

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